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ABSTRACT

Observation of language change caused by language contact tend not to support theories put forth by Meillet, Jakobson, Weinreich, and others that there are linguistic prerequisites for such change. A theory of the social factors that determine what kinds of language change will take place as a result of contact begins with the recognition of two different types of linguistic interference: borrowing, or the incorporation of foreign features into a language; and substratum interference, which occurs when speakers shifting to a target language fail to learn the language perfectly. In borrowing situations, the most important variable for predicting the degree and type of interference is the relative intensity of cultural pressure from source-language speakers on the borrowing-language speakers. In language shift changes, intensity of cultural pressure is still vital, but changes enter the language as soon as the shift begins and do not require a period of time to develop. Markedness is valuable in predicting which features of the target language are least likely to be learned, with universally marked features predictably the last to be learned. (JB)

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ARE THERE LINGUISTIC PREREQUISITES FOR CONTACT-INDUCED LANGUAGE CHANGE?

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In a 1973 article on areal linguistics, Werner Winter remarked of contact-induced language change that 'the inspection of a wide array of observations made...leads to the conclusion that in this field nearly everything can be shown to be possible, but...not much progress has been made toward determining what is probable' (135). Winter's article appeared in the Current Trends in Linguistics volume entitled Diachronic, Areal, and Typological Linguistics, and the content of that 604-page book provides indirect support for Winter's comment: aside from his own twelve-page article, contact-induced language change receives no systematic attention in the book. Today, Weinreich's 1953 book Languages in Contact still stands as the most complete and authoritative study of the subject; and Winter was right in saying, by implication, that even that impressive work gives us no means of predicting, however roughly, what types of contact-induced language change will occur when. This paper describes one approach to the problem of making such predictions and shows how some previous efforts along these lines have suffered from a failure to recognize a crucial distinction.

The answer to the question in the title is no: there are no linguistic prerequisites for, or constraints on, contact-induced language change. I have two interrelated reasons for saying this and, as I will demonstrate below, the first really follows from the second.

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First, then, as far as the strictly linguistic possibilities go, any linguistic feature can be transferred from any language to any other language. This assertion flatly contradicts most older views on the subject and some newer ones as well, but solid evidence has been available and in print for at least sixty years. Before examining the major source of misunderstanding in this area, let's look at some of the better known (and most widely accepted) linguistic constraints that have been proposed.

Meillet, for instance, believed that grammatical loans were possible only between very similar systems, especially dialects of a single language (1921:87). Many linguists have shared this view, often with the corollary assumption that, since similar systems will share (most of) the same categories, grammatical categories cannot be transferred. Both hypotheses are now known to be false, as we can see from examples like the ones Silverstein has analyzed historically in Chinookan. He points out that in both tense-aspect categories and in pronominal categories, 'Proto-Chinookan must have been under heavy categorial influence from the languages surrounding on the coast, before the speakers started moving upriver' (1977:154). He cites this external influence as the cause of, among other things, the 'adventitious rise of gender categories' in Chinookan (1977:154). Similarly, Boas believed that the obviative (fourth person) category had been diffused into western Sahaptian languages from neighboring Kutenai in the Pacific Northwest (1929:4).[1] There are now numerous examples in the literature of categorial diffusion between unrelated languages. To mention just one more, Andronov describes the Bengali plural suffixes

-rā (human) and -gulō, guli (non-human) both as direct morpheme borrowings (the suffixes themselves are of Dravidian origin) and as categorial borrowing, since the very un-Indoeuropean noun classification categories came from Dravidian with the suffixes (1964:124).

A less absolute linguistic prerequisite is the one proposed by Jakobson in 1938: 'a language accepts foreign structural elements only when they correspond to its own tendencies of development' (241). This echoes a prerequisite proposed specifically for phonological interference by Sapir (1921:200), and various other linguists, among them Weinreich (1953:25) and Vogt (1954:372), have cited Jakobson's constraint with approval. Now, Jakobson's claim is hard to disprove, because it has at least the potential of being circular -- if a language has accepted foreign structural elements, then, on Jakobson's hypothesis, it must already have had a tendency to develop in that direction. Silverstein's carefully argued case study of Chinookan tense-aspect developments, with different dialects undergoing interference from different sources and thus developing in quite different ways, provides a check of sorts on Jakobson's claim: if the tendencies were all already present in the language, why didn't the dialects all develop in the same way? Vogt's argument that foreign elements must correspond to 'innovation possibilities offered by the receiving system' (1954:372) hints at a solution to this problem, because the different interference features could be said to correspond to different "innovation possibilities" already present in the language. But there are more extreme cases than the Chinookan one, and these offer compelling evidence against Jakobson's hypothesis. One such example is the massive introduction of

Turkish features into all aspects of the grammar of Asia Minor Greek, as described by Dawkins (1916). These interference features include word order patterns, relative clause formation, phonetics, phonemic inventory, phonological rules (including vowel harmony), agglutination, and borrowed morphemes of every category, and they can hardly be explained as following tendencies already existing in Greek, because no other dialects of Greek have undergone any of the changes.

Weinreich proposes a more cautious linguistic constraint on interference: 'in the interference of two grammatical patterns it is ordinarily the one which uses relatively free and invariant morphemes in its paradigm...which serves as the model for imitation' (1953:41). As examples he cites the replacement of suffixed pronominal possessors on nouns by analytic constructions in Estonian (under Germanic influence), Amharic (under Cushitic influence), and colloquial Israeli Hebrew (under Yiddish and other European influence) (41-2). But there are counterexamples here, too. Asia Minor Greek, for instance, sometimes adds third person possessive suffixes to nouns on the Turkish model (Dawkins 1916:201).

Another of Weinreich's suggested constraints is one against the adoption of a full set of inflectional morphemes: 'The transfer of a full grammatical paradigm, with its formant morphemes, from one language to another has apparently never been recorded' (43-44). Winter (1973) agrees that the chances for such extensive interference are around zero, and the idea is so bizarre that probably most linguists would accept that as a minimal constraint on contact-induced

language change. Nevertheless, though I do not claim that such changes are common, they do occur. One possible example is the jargonization of Romani among Gypsies in England, as a result of which Romani vocabulary is used with English phonology and grammar, including the English inflectional morphology: in effect, the entire language has been borrowed, except for the lexicon. Two certain examples are Dawkins' Asia Minor Greek case, where Turkish personal suffixes are used with Greek verbs in some villages, and Menovščikov's Aleut case, where clearly the language is Aleut, but the finite verb morphology is Russian.[2]

More recent claims about linguistic constraints on interference seem to come mostly from phonologists. Hyman (1970) and Lovins (1973, 1974) believe that 'among the data that must be considered in trying to construct a tenable phonological theory are those of phonic interference' (Lovins 1974:240). In discussing the point, Lovins argues that her evidence from the phonological adaptation of English loanwords in Japanese 'supports the...claim that innate processes determine phonic interference' (1974:246). But even if this is true in some sense, no phonological analysis can be used as a predictor of the results of phonological interference, in the absence of precise information about the social situation in which the interference takes place. The need for such information is illustrated by the two sets of loanwords in Table I below, from Russian into Asiatic Eskimo. The earlier set is from the pre-Soviet period, when there was little bilingualism among Eskimos; the later borrowings date from the Soviet period, during which Eskimos have lived together with Russians and have been taught in Russian schools, so that Russian has become a second language for them.

Russian	Older Borrowings	Newer Borrowings	gloss
bljudce	pljusa	bljutca	saucer
čaj	saja	čaj	tea
tabak	tavaka	tabak	tobacco
pačka	paska-q	pačka	bundle

Table I

Russian Loanwords in Eskimo
(Menovščikov 1969:122)

In the earlier period, the Eskimos simply replaced the foreign sounds in the Russian words, e.g. b, c, and č, by the closest sounds in their own language: p for b word-initially and v for b intervocalically, s for c and č, and so forth. In the later period, since by then the Eskimos knew some Russian, they kept most of the Russian sounds in the loanwords. In order to predict the extent to which non-Eskimo Russian sounds will be altered in loanwords, we would need to know (at the very least) the level of bilingualism among the Eskimos; knowledge of native Eskimo phonology alone is clearly not enough.[3]

This example points to my second reason for answering no to the question in the title of this paper. Ultimately, all the proposed linguistic constraints on contact-induced language change fail because linguistic interference is conditioned in the first instance by social factors, not linguistic ones: both the direction of interference and the extent of interference are socially determined, not linguistically determined. Linguistic factors are of strictly secondary importance in the determination of the actual linguistic results of contact-induced language change.

This view is by no means universally accepted, as can be seen not only from the

proposed constraints already discussed but also from statements like the one Bickerton made recently in his introduction to a collection of Schuchardt's writings on pidgins and creoles (1979:xi):

> Schuchardt. . .has been praised for the way in which he related language to its social matrix. This virtue is easy to exaggerate -- most of what is of interest in language is to be found within the confines of single skulls -- but there can be no doubt that its possession is extremely useful to the student of "marginal languages".

Probably Bickerton's opinion would be shared by many modern linguists, though most of them might not be willing to state it so flatly. It is also compatible with the views of many structuralists of the 1950's, including Weinreich to the extent that he believed linguistic factors could determine the direction of interference (1953:41). But Bickerton is wrong in believing that social factors are of limited interest to students of marginal languages and (by implication) of no interest to students of other sorts of languages; specifically, in the present context, the view he represents would make it impossible to develop an adequate theory of contact-induced language change. The reason is that, as the example of the Russian loanwords in Eskimo shows, certain social factors must be taken into account before we can begin to make predictions about the results of linguistic interference.

The first step in developing such a theory is to draw a sharp distinction between the two fundamentally different types of linguistic interference. Then, under conditions of roughly similar intensity of contact within each type, we can make general predictions about the kinds of expected interference, based on linguistic criteria like typological distance between the source language and the language undergoing the interference.

The two types of interference I have in mind are the ones traditionally known

as borrowing and substratum interference. Borrowing is the incorporation of foreign features into a group's native language: the native language is maintained but is changed by the addition of the incorporated features. Invariably, in a borrowing situation, the first foreign elements to enter the borrowing language are words. If there is strong cultural pressure from the source-language speakers on the borrowing-language speaker group, then structural features may be borrowed as well -- phonological, phonetic, syntactic, and even (though much more rarely) features of the inflectional morphology. But the strong cultural pressure must apparently include institutionalized bilingualism in order for nonlexical borrowing to occur. Deshpande, for instance, points out that in Southeast Asian languages, in spite of the fact that their speakers have adopted hundreds of Indic loanwords along with Hindu and Buddhist religious and cultural systems and a living tradition of Pāli texts, the retroflex Indic consonants in the loanwords are simply replaced by (and merged with) nonretroflex apicals, e.g. t and ṭ→t and n and ṇ→n in Old Cambodian and Old Siamese (Deshpande 1979:258). Similarly, and more recently, British citizens living in India during the days of British rule adopted many Indian words for local items, but they apparently did not pronounce the words with retroflex or other non-English sounds when speaking English. By contrast, under conditions of widespread bilingualism the Soviet Asiatic Eskimos did borrow Russian sounds along with Russian words.

Substratum interference, or, to phrase it more accurately (since not all shifting groups are substrata), interference that results from imperfect group learning during language shift, occurs when a group of speakers shifting to a target language fails to learn the target language perfectly. The errors made

by members of the shifting group in speaking the target language then spread to the target language as a whole when they are imitated by original speakers of that language. Unlike borrowing, this type of interference does not begin with vocabulary: it begins instead with sounds and syntax, and sometimes includes morphology as well before words from the shifting group's original language turn up in the target language. Often, in fact, the target language adopts few words from the shifting speakers' language. For instance, to take India as an example again, Emeneau's hypothesis about the origin of retroflexion and other Dravidian features in Sanskrit and later Indic languages clearly involved substratum interference, as we can see from his remark that 'absorption, not displacement, is the chief mechanism in radical language changes of the kind we are considering' (1962:644). To interpret his proposal in the present context, the two basic assumptions are that Dravidian speakers, shifting in large numbers to the language of the Indo-Aryan invaders, superimposed their own habits of (among other things) retroflex-vs.-dental articulation on the Indic vocabulary as they learned it, and that they were numerous enough to influence Indic as a whole. This interference in Indic from Dravidian is striking in view of the fact that, as has frequently been observed, there are relatively few old loanwords from Dravidian in Indic. Other examples of similar sort are easy to find, especially in the speech of ethnically homogeneous subgroups which, because of relative geographic isolation, have maintained a heavily substratum-influenced form of a target language even though the target-language speech community as a whole has not been influenced. Examples are the English spoken natively in Tyrone in Ireland, with Gaelic interference (Todd 1975), and the English spoken primarily as a second language by Indians in India. In the Indian English case,

for example, English /t/ and /d/ are realized as retroflex stops, while /θ/ and /ð/ are sometimes pronounced as aspirated or unaspirated dental stops, thus reflecting the Indic and Dravidian retroflex : dental opposition; there is no phonemic distinction between /v/ and /w/, as in Indian languages; English /f/ is sometimes realized as an aspirated bilabial stop, while /p t k/ are realized as unaspirated only -- a partial refelction of the plain : aspirated opposition that occurs in many Indic languages (data from Pandit 1964).

The above examples involve only the phonology; syntactic and morphological examples are more complicated. But a general, and very neat, picture of the overall difference between borrowing and interference through shift can be seen in Rayfield's description of mutual interference between the Yiddish and the English spoken by a group of bilinguals whose native language is Yiddish. In their Yiddish -- that is, the native language, into which English features are borrowed -- these speakers have very strong lexical interference, moderate morphosyntactic interference, and weak phonological interference: as is usual in borrowing situations, words are borrowed first and structural features later, if at all. In their English -- their second language, in which interference features will be, in effect, adstratum features -- the lexical interference is only moderate, and both the morphosyntactic interference and the phonological interference are strong (Rayfield 1970:85). This is the pattern we can expect to find in all cases of borrowing and shift; and, since predictions about the types of expected interference features, and the order in which they will appear, depend crucially on which of these two situations we are dealing with, it follows that we must investigate the social setting before we can predict, or interpret historically, the areal diffusion of linguistic features.

Before looking more closely at specific social factors that help determine the results of linguistic interference within each of the two basic types, let us consider briefly some background to the picture just presented. The distinction I am emphasizing here is not a new one. The notions of borrowing and substratum interference have of course been standard in linguistics for a long time,[4] and the refinements of superstratum and adstratum in the second category are also rather old. Nevertheless, few linguists have recognized the implications for types of interference features carried by these two categories. Both Winter (1973) and Vildomec, for instance, make this distinction, and Vildomec even points out that it is striking how low the number of loanwords often is from a substratum language into the target language (1971:91). But Vildomec is still puzzled by what he sees as a discrepancy:

> Whereas some adherents of substratum theories maintain that pronunciation, particularly intonation, melody and rhythm of speech, are among the features most persistently dictated by the L^m . . . it has often been observed that, after a relatively short stay, immigrants to America speak their L^m with an English "accent" (1971:91).

The problem here is that prosodic and other phonological features are being viewed as having an existence of their own, independent of the context in which they occur. It is true that prosodic features of the original native language are very frequently maintained in a shifting group's version of the target language; intonation is one of the most striking features of both Irish English and Indian English. But the immigrants Vildomec refers to are <u>borrowing</u> English phonology into their native language. This is a quite different process, one dictated by different social factors and generally connected with language death, at least as far as the phonology of particular individuals is concerned. Shifting speakers maintain their original language's prosodic patterns if they haven't learned those of

the target language; immigrants who have succeeded in learning the prosodic patterns of a language they are shifting to may use those patterns so often in speaking the target language, and their own so seldom (and/or with a feeling that low prestige adheres to the native language) that they replace the native patterns with the ones borrowed from the target language.

By far the most common mistake found in discussions of linguistic interference is the assumption that all interference is borrowing. A typical statement is the following one, made by Frachtenberg in 1918:

> I believe it to be a fact that lexicography is more easily subject to borrowing . . . and that the formative elements and structure of a language are less influenced by those of some neighboring tongue (1918:177).

This statement is only half true. Frachtenberg is correct if he is talking only about borrowing proper, but incorrect if one considers the possibility (in interpreting a Sprachbund historically) that structural features of some neighboring tongue could have been brought into a language through shift of a subgroup of the neighboring language community.

Frequently, the failure to make this distinction leads to erroneous, or at least unsupported, historical conclusions. One such argument is Hock's conclusion that, since there are few early Dravidian loanwords in Indic, there is little likelihood of early contact between Dravidian and Indic (1974). This conclusion is not justified, however: the lack of numerous loanwords means only that <u>if</u> there was sufficient early Dravidian-Indic contact for Dravidian features to be diffused into Indic, that contact must have involved shift of Dravidian speakers to Indic, not borrowing by Indic from Dravidian.[5] Similarly, it has often been argued that the lack of old Uralic loanwords in Slavic means that there cannot have been any other early interference from Uralic in Slavic either but in fact

that lack only means that if there was any such early interference, it must have come about through shift as Slavic speakers spread into Uralic territory and absorbed speakers of Uralic languages.[6]

One other aspect of the importance of the distinction is that some of the linguistic constraints that have been suggested are relevant only for borrowing situations. Jakobson's proposal about a language accepting only those foreign structural elements that correspond to its own internal tendencies, for instance, can only apply to cases of borrowing (and, as mentioned above, only then when the cultural pressure is not very strong): in changes resulting from imperfect learning during language shift, the target language is not so much accepting changes as having them forced upon it, since it is the shifting speakers, not the original target-language speakers, who initiate the changes.

Let's look now at some of the kinds of social factors that must be taken into account in any predictive theory of contact-induced language change. In borrowing situations, first of all, the most important variable for predicting the degree and types of interference is the relative intensity of cultural pressure from source-language speakers on the borrowing-language speaker group. Because of space restrictions, I will discuss only the two extremes here.

In situations of casual contact, only lexical items will be borrowed, but these items may include derivational affixes detached from stems, like English -able, originally borrowed with French vocabulary but now productive in English (as in drinkable). I would claim that casual borrowing situations are the only ones in which the kinds of predictions made by Hyman, Lovins, and others about the phonological results of interference are useful. The reason is that, given such a social context, it is reasonable to argue that speakers will not borrow

foreign structure, but instead will adapt borrowed words phonologically to the closest sounds in their native language -- as with the earlier layer of Russian loanwords in Eskimo.

It is also in such situations that one may reasonably consider possible restrictions on the kinds of words that will be borrowed. It is often said that many languages can't or won't borrow verbs; Meillet believed this for French, for instance, because French verbs have such an elaborate inflectional structure that it is difficult to incorporate foreign verbs into the system (1921:84; cited by Vildomec, 1971:100). But Weinreich, pointing out that most languages with much verb inflection have means of converting words into verbs by adding verb-forming affixes,[7] remarks that the reason for the predominance of nouns over verbs in loanword lists is 'probably of a lexical-semantic, rather than a grammatical and structural nature' (1953:36-7).

The more interesting borrowing situations, at least from the viewpoint of contact-induced language change, are those involving intense and long-term cultural pressure from source-language speakers on borrowing-language speakers. The length of time is crucial here because short-term intense contact situations are likely to result in language death as borrowing-language speakers shift to the source language; often, in such cases, the borrowing language is abandoned before its speakers have time to incorporate many source-language features into it.[8]

In long-term intense contact situations, however, significant structural interference is likely to occur, and its nature depends to a considerable extent on the typological distance between the source language and the borrowing language.[9] If the two languages share many grammatical categories, structural changes in

the borrowing language are likely to be changes in the means of expression in the shared categories. A typical example is the replacement, in Asia Minor Greek, of single suffixes incorporating case and number by separate agglutinative case and number suffixes, in the context of Turkish pressure dating from at least the fifteenth century (Dawkins 1916).

Perhaps the most common interference of this sort is found in nonstandard dialects which are under pressure from a prestigious standard dialect that is taught in local schools. In Serbocroatian, for example, most dialects have a system of noun inflection that includes six or seven cases and two numbers. In masculine and neuter nouns of the major declension, Standard Serbocroatian has a single suffix -ima for three oblique plural cases (instrumental, dative, and locative) and -a for the other oblique plural case, the genitive. Most dialects of the čakavian subgroup, by contrast, either distinguish all four oblique cases in the plural or have genitive-locative or instrumental-locative syncretism. But those čakavian dialects on which standard-language pressure is strongest have undergone (or are undergoing) changes that upset the old regularities and replace them with the standard ones. One example is the dialect of the island Hvar: in 1935, older people in some villages were still using a genitive-locative plural suffix -ih that was opposed to the suffixes in the other oblique cases, but younger people were using -ih only in the genitive, and the suffix -ima, borrowed from the standard dialect, for the other three oblique plural cases (Hraste 1935:17-25). It should be noted that these changes clearly run counter to the historical structural tendencies of the čakavian dialects themselves, so they constitute further evidence against the claim that structural interference will not violate tendencies inherent in the borrowing language.

If the borrowing language and the source language are typologically very dissimilar, most structural interference in the borrowing language will involve the breakdown of its structures in those categories not present in the source language. The loss of gender distinctions in Asia Minor Greek under the influence of Turkish (which has no grammatical gender), is a typical example. In particular, functions originally expressed by morphological means in the borrowing language are likely to switch to syntactic means of expression under source-language pressure, but the borrowing language is much less likely to adopt source-language morphological categories in place of its own functionally equivalent syntactic categories. This is the germ of truth in Weinreich's prediction that the grammatical pattern 'which uses relatively free and invariant morphemes' will serve as 'the model for imitation' (1953:41). The patterns themselves, as I've argued above, do not determine the direction of the interference, but it is certainly true that a borrowing language will adopt source-language syntax much more readily than source-language morphology. Even the latter type of borrowing occurs in the most extreme cases, as with the Asia Minor Greek borrowing of Turkish-type pronominal possessive affixes in the third person, but such morphological expansion through borrowing is rare.

Another of Menovščikov's case studies provides a more typical example of the trade-off between syntax and morphology in intensive borrowing situations. This is the case of Asiatic Eskimo borrowings from the Paleosiberian language Chukchi (1969:124-30). According to Menovščikov, the Eskimos of northern Asia had to learn the language of the economically powerful Chukchis during many centuries of intensive contact. Among the many words borrowed into Eskimo from Chukchi were numerous function words, and these included coordinate and subordinate conjunctions.

The borrowing of these conjunctions led in turn to a partial loss of the native Eskimo morphological means of expressing coordination and subordination, for instance by gerunds and loosely bound postpositional elements. Thus the Eskimo comitative clitic/suffix -ɬju, which was originally obligatory, became optional and finally (at least sometimes) disappeared entirely after the Chukchi conjunction ɨnkam 'and' was borrowed into Eskimo. Menovščikov says that the following three sentences are all currently possible, depending on individual style and on the situation (1969:128):[10]

(1) Nunivaymi kijaɣtaqut tɨyiyat-ɬju qawayɨt-ɬju. 'On the tundra live beasts and birds.'
on the tundra live beasts-COM birds-COM

(2) Nunivaymi kijaɣtaqut tɨyiyat-ɬju ɨnkam qawayɨt-ɬju.

(3) Nunivaymi kijaɣtaqut tɨyiyat ɨnkam qawayɨt.

Turning now to contact-induced changes that come about through language shift, we find that the most crucial social factors are not the same as the most crucial factors in borrowing situations. Although intensity of cultural pressure is of course still vital here (because without such pressure there would be no language shift), time is not. Changes that occur in a target language as a result of imperfect group language learning enter the target language as soon as the shift begins, and they may become established in the target language as a whole in a very short period of time, if the shift is rapid and the shifting group large. The most important variable seems to be the ratio of shifting speakers to original target-language speakers, because the availability of the model is certainly a predictor of how well shifting speakers will be able to learn the target language, and also of the likelihood that their errors will spread to the entire target language (or, as with Tyrone English and Indian English, to a relatively isolated

subgroup of target-language speakers).

The smaller the number of shifting speakers relative to target-language speakers, the more likely it is that they will learn the target-language perfectly. Most older groups of urban immigrants from Europe in the United States illustrate this point: grandparents may not learn English, but children born in (say) an Italian-American community in Pittsburgh will be native speakers of English, and their Pittsburgh dialect of English will be indistinguishable from that of any other native speaker. The ethnic group (though not all of its members) has shifted to English, and no systematic errors remain in the English of the second generation. Only when the members of the shifting group far outnumber the members of the original target-language group, as was presumably the case with early Dravidian-Indic contact and certainly the case with the English in India when Indian English evolved, are learning errors likely to persist and to be imitated, eventually, by original target-language speakers.

As with borrowing situations, the more interesting cases of language shift in the present context are those which do result in extensive interference in the target language, namely, those in which shifting speakers constitute a majority in the emerging speech community. In such cases, features that are shared by the source language and the target language are likely to be learned easily by the shifting group. Target language features not present in the shifting group's language are less likely to be learned by the shifting speakers, and it is probable that considerations of markedness will prove on investigation to be valuable in predicting which features in this category are least likely to be learned: if universally marked features are relatively difficult to perceive and/or to produce, then one would expect those features to be the last

to be learned correctly in situations of the type we are considering.

In any case, some features of the target language that are not present in the shifting group's original language will not be learned at all, and so will vanish from the target language as a whole if the shifting group's version of that language prevails. An example of this type is the loss of the /v/ : /w/ opposition in Indian English.

Other features of the target language will be overgeneralized or reinterpreted by the shifting speakers, often to the extent that their source is not obvious. This linguistic process is often not recognized, although Alleyne refers to its cultural analogue as a standard notion in anthropology (1979:100). One instance of reinterpretation is the treatment of English /θ/ and /ð/ as dental stops in Indian English. A more interesting example is a Hungarian interference feature introduced into a Serbocroatian dialect on the Yugoslav-Hungarian border by shifting Hungarian speakers: the shifting speakers failed to learn the complex Serbocroatian prosodic pattern, in particular stress placement, which is phonemic in Serbocroatian but not in Hungarian. Though they clearly assumed that stress was predictable, they did recognize that the Serbocroatian stress was not fixed on the initial syllable, as it is in Hungarian. So, as a compromise, they pronounced all Serbocroatian words with penultimate stress, and today the entire dialect has that stress rule (Ivić 1964).

When shifting speakers fail to learn target-language structures, they often employ the simple strategy of using partly analogous structures from their own original language. But here again, the structures may be overgeneralized or reinterpreted as a result of the learners' efforts to adapt to target-language usage. A probable case of this sort of overgeneralization is the absence of

the verb 'to be' in certain sentence types in Russian, due to Uralic substratum influence. Décsy points out that this verb is missing in more contexts in Russian than in the relevant Uralic languages, and concludes from this fact that the loss of 'to be' in Russian cannot have been influenced by a Uralic substratum (1967:158); the fallacy in this reasoning is that an exact correspondence between source-language structures and target-language structures is not even very likely, much less inevitable. Similar examples of overgeneralization are the use of palatalization as a distinctive feature in most consonants in Russian, as opposed to its restriction to apical consonants in Uralic languages (but compare Kiparksy 1969, where Russian palatalization is rejected as a Uralic interference feature); and the appearance of retroflex consonants in Indic in positions where they do not occur in Dravidian languages. A final example of reinterpretation is the emergence of the so-called second genitive in Russian, a partitive construction due to the influence of Uralic, which arose in Russian through reinterpretation of a former noun-class distinction.[11]

Now that the two basic types of contact-induced language change have been carefully distinguished, I must emphasize that there is unfortunately no reason to expect these two types of interference to take place in mutually exclusive contexts. Sometimes, to be sure, we find one without the other. In particular, if two neighboring languages are found to share many structural features but little or no vocabulary, the possibility should immediately be considered that one of the speech communities has absorbed a subgroup of the other's original speaker group and has undergone substratum interference as a result, because borrowing is not a plausible hypothesis in the absence of lexical connections. And in some borrowing situations, like that of Asia Minor Greek, no substratum interference has occurred: Dawkins reports widespread shift from Greek to Turkish, but not from Turkish to Greek, so that all the Turkish interference in Greek can be assumed to be due to borrowing. In some cases, however, a language may be undergoing both types of interference at once. Target -

language speakers may be borrowing words and even structural features from another language while that language's speakers are shifting to the target language and incorporating their learners' errors into it. This kind of complexity probably accounts for the remarkable data Menovščikov reports for the Aleut spoken on Mednyj, one of the two Commander Islands off the northeastern coast of the Soviet Union.

Beringa and Mednyj, the Commander Islands, were first settled by Aleuts in 1826, according to Menovščikov. Russians soon settled there too, to hunt fur seals. On Mednyj, there were perhaps three hundred Aleuts and thirty Russians; on Beringa, the Aleut population was much larger in proportion to the Russian population. Otherwise, the situations on the two islands were socially and economically similar. Most Russians married Aleut women, and bilingualism arose through intermarriage and through economic ties with Russia. This bilingualism was, however, functionally limited. In the second half of the nineteenth century the fur seal trade declined, so there was no further influx of Russian hunters to the islands. There was thus no further need for the Russian language, and for a time Russian was no longer spoken there. (This situation has now changed dramatically: nowadays few Aleuts on Mednyj still speak Aleut, so Russianization must have proceeded rapidly over the last twenty or thirty years).

The Aleut spoken on Beringa was apparently not heavily influenced structurally by Russian -- a nice illustration of the importance of numbers in borrowing contexts, if Menovščikov is right in saying that the ratio of Aleuts to Russians was the only significant difference between the contact situation on Beringa and the contact situation on Mednyj.

Mednyj Aleut did not undergo extensive interference in noun morphology, but

the elaborate Aleut inflectional patterns in finite verbs were replaced by Russian ones, especially the personal endings. Menovščikov gives no reason for this differential grammatical interference, but a look at the inflectional categories of Aleut suggests a possible explanation. Aleut nouns are highly inflected, with five cases, three numbers, and a definite : indefinite opposition. But Russian has the categories of case and number, even if the items in those categories do not exactly match those of Aleut, and definiteness is a syntactic feature of Russian. Aleut verbs are another story. An Aleut finite verb has over four hundred endings: three and a half persons, three numbers, six tense/aspect categories, six moods, three voices, and two degrees. In addition, there are two verb classes (Geoghegan 1944). Functionally limited bilingualism in Aleut on the part of Russian traders -- or, more likely, husbands -- might include a reasonably good grasp of the somewhat familiar nominal inflectional patterns, but it easy to imagine a failure to cope with the awe-inspiring array of finite verb forms. And Aleuts bilingual in Russian might well have found it easier to communicate with Russians in Aleut if they used Russian endings on the verbs. In any case, Table II gives Beringa forms as a control, beside Mednyj forms that have been Russianized in personal and tense endings (IIa, IIb) and in negative and imperative affixation (IIc). The change from morphological to syntactic means of expressing the dual number (IIa) is typical of borrowing interference, and the replacement of a negative suffix embedded in the verb form by a negative clitic/prefix is similarly common. The switch from agglutinative native Aleut tense-person affixation to flexional Russian tense-person affixation mirrors the opposite change in Asia Minor Greek, except that in Mednyj Aleut all the new tense-aspect suffixes are Russian ones, whereas in the Greek case

most of the suffixes themselves are Greek. The really striking feature of this Aleut case is that the adoption of Russian past-tense suffixes, which do not show person, necessitates the use of personal pronouns -- and Mednyj Aleuts use(d) the Russian pronouns for this purpose, even though they continue(d) to use native Aleut pronouns with non-finite (and hence non-Russianized) verb forms (IId)!

		Beringa Aleut	Mednyj Aleut	Russian	glosses
(a)	sg. 1:	uŋuči-ku-q	uŋuči-ju	ja sižu	I sit
	2:	uŋuči-ku-χt	uŋuči-iš	ty sidiš	you sit
	3:	uŋuci-ku-χ	uŋuči-it	on sidit	he sits
	du. 1:	allax uŋuči-ku-s	allax uŋuči-im	my dvoje sidim	we two sit
	2:	uŋuči-ku-χt-xiðix	allax uŋuči-iti	vy dvoje sidite	you two sit
	3:	uŋuči-ku-x	allax u uci-jat	oni dvoje sidjat	they two sit
	plu. 1:	uŋuči-ku-s	uŋuči-im	my sidim	we sit
	2:	uŋuči-ku-χt-xičix	uŋuči-iti	vy sidite	you sit
	3:	uŋuči-ku-s	uŋuči-jat	oni sidjat	they sit
(b)					
present:		uŋuči-ku-q	uŋuči-ju	ja sižu	I sit
past:		uŋuči-na-q	ja uŋuči-il	ja sidel (masc.)	I sat
future:		uŋuči-n aŋa-q	budu uŋuči-t'	ja budu sidet'	I will sit
(c)		awa-ða	abaj	rabotaj	work!
		saɣa-ða	saɣaj	spi	sleep!
		awa-laɣ-aða	niábaj	ne rabotaj	don't work!
		sa a-laɣ-aða	nisaɣaj	ne spi	don't sleep!
(d)		saɣana-q	ja saɣa-l	ja spal (masc.)	I slept
		saɣa-na-χt	ti saɣa-l	ty spal (masc.)	you slept
		saɣa-na-χ	on saɣa-l	on spal (masc.)	he slept
			tiŋ aɣjaxčaɣu-ŋ	esli ja pojdu	if I go
			tin aɣjaxčaɣu-n	esli ty pojdëš	if you go
			2 sg. going + if + 2 sg.		

Table II

Russianized Mednyj Aleut Finite Verb Forms

(Menovščikov 1969:132)

Most examples of contact-induced language change discussed in this paper are well documented from relatively recent times. For some of these examples we have careful and thorough case studies that include much social information; Dawkins' Asia Minor Greek case and a number of recent articles on Dravidian-Indic contacts in the historical period are exemplary in this respect. What we learn from such studies should eventually enable us to make historical inferences about past contact situations whose social setting is not recorded. Meanwhile, I think it is time for historical linguists to abandon their traditional methodological inclination to consider the possibility of external causation only when all efforts to find an internal motivation for some change have failed. Aside from the fact that a weak internal motivation is less convincing as a cause than a strong external motivation, we should keep in mind the possibility of multiple causation.[12] I would agree with Ohala, for instance, that to explain sound change 'one should first try all the phonetic explanations' (1974:268); but I would disagree with his added comment that 'only if they don't work (one should) seek an explanation in terms of social, psychological, or historical facts.' An explanation should be as complete as possible. It may well be that, as some have argued, retroflexion in Indic arose in a series of phonetically plausible stages, but the original stimulus or trigger for that series of changes was surely the Dravidian substratum influence. In other words, even if Vogt is correct in believing that structural changes <u>can</u> always be described 'in terms of the system in which they take place' (1954:372-3), it does not follow that we will always achieve the best explanations of changes through such descriptions.

In the same vein, substratum influence in particular is even responsible sometimes for <u>lack</u> of change, as with the 'conserving influence' Kiparsky

ascribes to Finnic in the retention by Russian of the so-called nominative object (Kiparsky 1969). For this reason, I am sceptical about the implications of Hamp's remark that 'areal study requires the results of genetic comparison simply to remove the trivia of inheritance,' e.g. the noun inflexions of Russian, Polish, and Lithuanian (1977:279). Of course areal studies cannot usefully be carried out in ignorance of the genetic picture; but, by the same token, the history of a language family cannot be fully understood without areal studies. Because retention as well as innovation may be externally motivated, the presence of inherited features is not always adequately explained once one determines their genetic origin. If a Uralic substratum exerted a conserving influence on the Russian nominative object, then the possibility should at least be considered that the Baltic and Slavic case systems were retained under the conserving influence of the same substratum, because the relevant Uralic languages have some of the most elaborate case systems in the world.

Since no language, probably, has developed in total isolation from all other languages, contact-induced language change is surely far more pervasive than many historical linguists have been willing to believe. If this is so, many general theories of language change and specific analyses of stages in a language's history suffer from serious inadequacies that can only be remedied by taking language contacts into account from the outset.

FOOTNOTES

1
This example, like some of the others in Boas' paper, makes an earlier remark in the same article surprising, because it seems to indicate that Boas agreed with Meillet: 'So far as I know the actual process of a transfer of grammatical categories from one language to another has never been observed, although minor changes, like the adoption of a form here and there, and syntactic influences are known to occur' (1929:2).

2
Menovščikov 1969. This case and two of Menovščikov's other examples will be described in some detail below, because they are of considerable general interest but are unlikely to be known to most American linguists, since they appeared in Russian publications.

3
The implications for phonological theory of this sort of socially determined difference in loanword phonology are discussed in detail in Thomason & Kaufman 1976.

4
Of the two, borrowing has usually been considered the more important. But substratum interference may have an even longer historical tradition in western thought, because the earliest reference I've seen to substratum influence on language change is in Herodotus: in describing the community established by a group of Scythian men and their Amazon wives, Herodotus reports that 'the Sauromatae speak the language of Scythia, but have never talked it correctly, because the Amazons learned it imperfectly at the first' (Book IV, Chapter 117).

5
It should be noted here that Deshpande (1979) has recently argued convincingly that the time period relevant for consideration of Dravidian substratum influence on Indic is later than previous authors have thought -- namely, after the time at which the Rigveda was originally composed. On his theory, features like retroflexion were not present in the original oral version of the Rigveda, but were introduced later, through oral transmission of the text.

6
As has often been pointed out, there are other difficulties with claims of Uralic influence on Slavic as a whole (as opposed to Russian alone). Timing is the major problem. But if Décsy is right in believing that the ancestors of the Russians first came into contact with Uralic speakers about the end of the sixth century A.D. (1967:150), then there could have been time for contact-induced changes to spread from northern to southern Slavic dialects, because communication between northern and southern Slavs was not finally cut off until several centuries later -- in the tenth century in the west, later in the east (Jakobson 1955:5). The last Common Slavic change -- that is, the last single sound change to affect

all the Slavic languages/dialects, namely, the fall of the jers -- is generally dated from the tenth century. It spread from south to north, and it was not completed in northern Russian dialects until the thirteenth century. It is therefore possible for a contact-induced change to have spread from north to south somewhat earlier. However, the fall of the jers could plausibly be explained as a series of independent developments due to drift, whereas the best candidate for a contact-induced change (because it is least likely to be due to drift) is the rise of the category of animacy in the noun morphology, and this would have to be accounted for by direct spread from dialect to dialect. See fn. 11 below for further discussion of the history of animacy in Slavic.

7

Terrence Kaufman (p.c. 1981) offers an example to add to Weinreich's set. Mayan languages, like many others, are indeed inhospitable to the borrowing of verbs as verbs, for the reason Meillet gave. But these languages have two devices for borrowing Spanish verbs: the more common one is to borrow a Spanish infinitive (which is a noun) as such and use a Mayan verb meaning 'do' as an auxiliary, thus creating a transitive verb; the other is to borrow the infinitive and add a Mayan verb-forming suffix (N→tv).

8

Time is not the only variable here, of course. It is well known that the existence of a prestigious standard language often inhibits structural borrowing. Dawkins found, for example, that in Turkey the Greek spoken in those villages with a Greek school showed considerably less Turkish interference than did the Greek in villages without a Greek school. I do not mean to imply, here or elsewhere in this paper, that the social factors I am discussing are the only relevant ones. I am concentrating on the most important factors, both because of space restrictions and because, in interpreting the past, historical linguists will rarely have detailed social information.

9

Thomason 1980 provides further examples and discussion of this issue specifically for the inflectional morphology.

10

In these and the other examples from Menovščikov's article, I have transliterated his basically phonemic Cyrillic orthography for Eskimo and Aleut as phoneme symbols. One or two of his symbols puzzle me, however. In particular, his italic Cyrillic symbol surely represents the phoneme /γ/ in Aleut, but the phonemic inventory I have for Siberian Eskimo has only /γ/, so I am not sure what his (as opposed to /γ/) represents here. I am also not sure whether the symbol (transliterated in this paper as ɨ) represents this or some other vowel, perhaps [ɪ].

11

A more doubtful example of reinterpretation is the rise of the animacy category in Slavic. As mentioned in fn.6 above, this distinction is unlikely to have emerged in Slavic as a result of drift, and there is no widely accepted explanation for its appearance: Andersen (1980) and Klenin (1980), for instance, conclude that it is 'an example of spontaneous morphological innovation of a grammatical category' (Klenin 1980:253-4). It was originally expressed in Slavic by a genitive-accusative singular form in the major masculine noun declension. In some Uralic languages, e.g. Mordvin, a genitive-accusative singular form is used when a direct object is definite. Now, Uralic languages have no grammatical gender; but it is possible that shifting Uralic speakers, in their struggles with the unfamiliar Common Slavic gender distinctions, introduced their native definite : indefinite opposition, with its genitive-accusative marker, into the Slavic target language. This would be analogous to their reinterpretation of a noun-class distinction in genitive case forms between o-stems and u-stems as a case distinction, genitive proper vs. partitive. One bit of evidence in support of this tentative hypothesis about the origin of the animacy category in Slavic is Huntley's argument (following Meillet) that the original opposition did involve definiteness: definite mature human : other (Huntley 1980:196). The major objection to the proposal is not the semantic shift, which (as I've tried to show) is quite normal in substratum interference, but the timing (see fn.6).

12

See Joseph 1981 for a discussion of multiple causation in certain changes in languages belonging to the Balkan Sprachbund.

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